PROGRAM-RELATED FATALITIES

MICHIGAN 2001

MIOSHA Information Division
Michigan Department of Consumer
& Industry Services
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INTRODUCTION

The latest National Census of Fatal Occupational Injuries data shows that 5,915 fatal work injuries occurred in 2000. In Michigan there were 58 program-related fatalities reported in 2001 or about 1.0% of the national total. Program-related fatalities in Michigan are recorded and tabulated by the MIOSHA Information Division, Bureau of Safety and Regulation, Michigan Department of Consumer and Industry Services. The sources of data include the Basic Report of Injury - Form 100 and telephone reports of fatalities to the Bureau of Safety and Regulation. The conditions necessary for a fatal case to be program-related are given in the NOTE ON PROGRAM RELATED CASES (see page 8).

Program-related fatalities have been recorded since 1975 in Michigan. A high of 115 program-related fatalities occurred in 1977. There was a gradual decrease until 1983 when 52 program-related fatalities were recorded. Program-related fatalities increased from 52 in 1983 to 74 for 1986. A two-year decline to 64 cases in 1988 was recorded before an increase to 76 program-related fatalities in 1989. Between 1989 and 1993 the number of fatalities recorded dropped to 51, showing a reduction of about 54 percent from the number of cases in 1978. There were 61 program-related fatalities recorded during 1994, this decreased to 48 program-related fatalities in 1995 and decreased again to 46 program-related fatalities in 1996. This is 58.6 percent lower than the 111 recorded in 1978 and the lowest number of program-related fatalities recorded in over 20 years. The 76 program-related fatalities recorded in 1997 is 31.6% lower than the 1978 figure of 111. The number of fatalities decreased from 76 in 1997 to 68 in 1998 before increasing to 87 in 1999. Fifty-nine program-related fatalities were recorded in 2000 which dropped to 58 in 2001.

The intention of this report is to contribute to a further understanding of program-related fatality profiles and hence, to the continued effort of preventing and reducing fatal cases. Information presented in this report may be of interest to employers and employees, in general, and safety professionals and consultants, in particular. Any inquiries regarding this report may be addressed to:

MIOSHA Information Division
Michigan Dept. of Consumer & Industry Services
7150 Harris Drive, Box 30643
Lansing, Michigan 48909-8143

Telephone (517) 322-1851

PROGRAM-RELATED FATALITIES MICHIGAN 2000

This program-related fatality information for Michigan was compiled from the "Employers Basic Report of Injury", Workers Disability Form 100s and from direct telephone reports of fatalities to the Bureau of Safety and Regulation. Only fatal cases that are program-related, as defined by the Bureau of Safety and Regulation, Michigan Department of Consumer and Industry Services are compiled. Therefore the data does not include fatalities resulting from heart attacks, homicides, suicides, highway personal motor vehicle trips and aircraft accidents. The figures are shown in Tables 1 through 12.

The number of program-related fatalities declined from 115 in 1977 to 52 in 1983 gradually increased to 74 in 1986 before declining over the next two years to 64 in 1988. Program-related fatalities in Michigan during the calendar year 1989 increased to 76 before again declining over the next two years to 60 in 1991. Michigan recorded 61 program-related fatalities in 1992, then declined to 51 in 1993 before increasing to 61 in 1994. Program-related fatalities decreased over the next 2 years to an all time low of 46 program-related fatalities in

1996 before increasing to 76 in 1997. Sixty-eight program-related fatalities were recorded in 1998, a ten percent decline from 1997 before increasing to 87 in 1999. Program-related fatalities dropped to 59 in Michigan for the year 2000. A definition of program-related cases can be found on page 8 of this report. Program-related fatality trends are shown in Table 1.

This report is an overview of how the fatalities were distributed across industry groups; occupations; sources of injury or illness; events or exposures; parts of body affected; and nature of injury or illness. Frequencies of fatalities by age group, gender, month of occurrence and counties of occurrence are also provided.

Table 2 shows the trend in the distribution of program-related fatalities by industry groups from 1994 to 2001. Beginning in 1999, the industry group category is based on the standard industrial classification (S.I.C.) of the type of job being performed by the employee at the time of the accident. Prior to 1999, the industry group category was based on the standard industrial classification (S.I.C.) of the employer regardless of the type of job being performed by the employee at the time of the accident. This change was found to have minimal impact on the industry group categories.

The largest number of fatalities occur in the Manufacturing and Construction industries. The Manufacturing; Transportation and Public Utilities; Retail Trade; and Services industry divisions experienced a decrease from the previous year. Agriculture, Forestry and Fishing; Construction; and Public Administration showed increases in the number of fatalities from the previous year. The industries of Oil and Gas Extraction; Wholesale Trade; and Finance, Insurance and Real Estate recorded the same number of fatalities as the previous year. The largest decrease was recorded in Transportation and Public Utilities recording 3 fewer fatalities in 2001 than in 2000.
Program-related fatalities by occupation are shown in Table 3. The most affected occupation group in 2001 with 13 fatalities was Construction Trades followed by Handlers, Equipment Cleaners, Helpers and Laborers with 15 fatalities. Transportation and Material Moving occupations recorded 9 fatalities, while 8 fatalities occurred in the Machine Operators and Tenders, Except Precision occupation group in 2001.
The sources of injury or illness leading to program-related fatalities during 2000 - 2001 are listed in Table 4. Floors, Walkways, Ground Surfaces; (13) Construction, Logging & Mining Machinery; (8) Building Materials, Solid Elements; (6) Highway Vehicle Motorized; (4) and Material Handling Machinery; (4) combined, accounted for 35 cases or about 60 percent of the sources of fatal injury or illness.
The number of victims that Fell to a Lower Level during 2001 was thirteen. Nine of the fatalities were the result of being Struck by Objects. Victims being Caught In or Compressed by Equipment resulted in seven fatalities, and

Contact with Electric Current accounted for two fatalities. Table 5 shows program-related fatalities by event or exposure.

Parts of the body affected by fatal injury or illness show that Head, Trunk Multiple, and Multiple Parts, together, accounted for 75 percent of the fatalities. Nine fatal injuries or illnesses were specified for Body Systems as the part of body affected. Two cases recorded the Neck as the part of body affected by fatal injuries and illnesses during 2001. Data is shown in Table 6.

The nature of the fatal injuries or illnesses reported were Electric Shock, Electrocution (2); Internal Injuries of the Trunk (15); Asphyxiation, Strangulation, Drowning, Suffocation (4); and Burn, Heat (2). A significant number, approximately 27 percent, of the fatalities that occurred in 2001, were the result of intracranial injuries to workers. Details of the nature of injuries and illnesses causing program-related fatalities are given in Table 7.

Employees between the ages of 26 and 45 suffered about 51 percent of the fatal injuries and illnesses. There were 2 fatalities to workers under the age of 21. The age group of 21-25 suffered 6 fatalities. The age groups of 51-55 and 56-60 both suffered 5 fatalities. The age group of 41-45 recorded the highest number for any of the five-year age categories with 9. The age group of 61 and over suffered 3 fatalities. Of the 58 victims, 57 were male employees. The distribution of program-related fatalities by age and gender are shown in Tables 8 and 9.

In 2001, July and October recorded the highest number of fatalities (9). Eight program-related fatalities were reported during February. The month of June recorded 7 fatalities while the months of January, and August each recorded 5 fatalities. May and September both recorded four fatalities and December recorded one fatal. March and November recorded the lowest number of fatalities with zero. Details are shown in Table 10.

Program-related fatalities by industry group and day of the week are shown in Table 11. The highest number of fatalities by day of the week shows Tuesday with 17, followed by Monday showing ten, while Wednesday recorded nine. Eight program related fatalities were recorded on Thursday and seven on Saturday. There was one fatality recorded on Sunday in 2001.

The distribution of fatality cases by counties shows that 22 counties reported program-related fatalities in 2001. Wayne County reported the largest (11) and Kent County showed the second largest number of cases with seven. Oakland county reported 6 fatalities while Washtenaw county reported four. A complete distribution of fatality cases by county of occurrence is shown in Table 12.

Even though Michigan's 2001 total program-related fatality cases are far less than the thousands of cases reported nationwide, the consequences of these on-the-job deaths in terms of human suffering, lost workdays, decreased production, and increased compensation rates are all too significant to be overlooked.

In order for Michigan to reduce the number of on-the-job fatality cases, it requires a conscious effort on the part of employers to recognize and comply with MIOSHA standards, develop and implement safe working procedures and assure that employees observe and practice these procedures. The MIOSHA program offers on-site consultation and safety education and training opportunities to employers and employees alike to help them achieve this goal.

The program-related fatality data for Michigan are presented in the following series of Tables 1 through 12. A brief description of how the program-related fatalities occurred is also provided following the series of tables. The descriptions are listed by industry groups based on the standard industrial classification of the type of job being performed by the employee at the time of the accident and are valuable insights as to how the accidents occurred. The information can be very useful to safety professionals, in particular, for use in prevention planning.

NOTE ON PROGRAM-RELATED CASES

A fatality is recorded as program-related if it appears to be related to one or more of the following conditions:

1. The incident was found to have resulted from violations of MIOSHA safety and health standards or the general duty clause;

2. The incident was considered to be the result of a failure to follow a good safety and health practice that would be the subject of a safety and health recommendation.

3. The information describing the incident is insufficient to make a clear distinction between a "program-related" and "non-program-related" incident, but the type and nature of the injury indicates that there is a high probability that the injury was the result of a failure to adhere to one or more MIOSHA standards, the general duty clause, or good safety and health practice.

Any further inquiries may be addressed to:

MICHIGAN DEPARTMENT OF CONSUMER & INDUSTRY SERVICES
MIOSHA INFORMATION DIVISION
7150 HARRIS DRIVE, BOX 30643
LANSING, MICHIGAN 48909-8143
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TABLE 1

PROGRAM-RELATED FATALITY TRENDS
MICHIGAN 1978 - 2001

YEAR	CASES	PERCENT CHANGE	CUMULATIVE PERCENT CHANGE
1978	111	------	------
1979	89	-19.8	- 19.8
1980	73	-18.0	- 34.2
1981	65	-11.0	- 41.4
1982	67	+ 3.1	- 39.6
1983	52	-22.4	- 53.2

1984	59	+13.5	- 46.8
1985	67	+13.6	- 39.6
1986	74	+10.4	- 33.3
1987	73	- 1.4	- 34.2
1988	64	-12.3	- 42.3
1989	76	+18.8	- 31.5
1990	72	- 5.3	- 35.1
1991	60	-16.7	- 45.9
1992	61	+1.7	- 45.0
1993	51	-16.4	- 54.1
1994	61	+19.6	- 45.0
1995	48	- 21.3	- 56.8
1996	46	- 4.2	-58.6
1997	76	+65.2	-31.6
1998	68	-10.5	-38.7
1999	87	+27.9	-21.6
2000	59	-32.2	-46.8
2001	58	- 1.7	-47.8

SOURCE: MIOSHA Information Division, Michigan Department of Consumer & Industry Services

TABLE 2

PROGRAM-RELATED FATALITIES
BY INDUSTRY GROUPS
MICHIGAN 1994 - 2001

	YEARS							
INDUSTRY GROUP	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
AGRICULTURE, FORESTRY AND FISHING	2	5	1	2	4	2	1	3

OIL AND GAS EXTRACTION	0	1	0	0	0	0	0	0
CONSTRUCTION	28	15	18	32	25	33	24	28
MANUFACTURING	13	16	12	22	22	25	17	16
TRANSPORTATION AND PUBLIC UTILITIES	5	4	5	5	5	10	5	2
WHOLESALE TRADE	3	2	2	1	3	5	6	6
RETAIL TRADE	3	1	1	3	4	3	1	0
FINANCE, INSURANCE AND REAL ESTATE	0	0	0	1	0	0	0	0
SERVICES	6	2	2	8	3	8	3	2
PUBLIC ADMINISTRATION	1	2	5	2	2	1	2	1
TOTAL	**61**	**48**	**46**	**76**	**68**	**87**	**59**	**58**

Note: Beginning in 1999, the industry group category is based on the standard industrial classification (S.I.C.) of the type of job being performed by the employee at the time of the accident. Source: MIOSHA Information Division, Michigan Department of Consumer & Industry Services.

TABLE 3

PROGRAM-RELATED FATALITIES
BY OCCUPATION
MICHIGAN 2000 - 2001

OCCUPATION	**NUMBER OF CASES**	
	2001	**2000**
Executive, Administrative and Managerial	2	3

Professional Specialty Occupations	0	2
Technicians and Related Support	0	1
Sales Occupations	1	0
Protective Service Occupations	1	1
Service, Except Protective and Household	3	0
Farming, Forestry and Fishing	4	5
Mechanics and Repairers	2	3
Construction Trades	13	16
Precision Production	2	0
Machine Operators and Tenders, Except Precision	8	3
Fabricators, Assemblers and Handworking	1	2
Production Inspectors, Testers, Samplers and Weighers	1	0
Transportation and Material Moving	9	15
Handlers, Equipment Cleaners, Helpers and Laborers	11	8
TOTAL	**58**	**59**

Source: MIOSHA Information Division, Michigan Dept. of Consumer & Industry Services.

TABLE 4

PROGRAM-RELATED FATALITIES BY SOURCE OF INJURY OR ILLNESS MICHIGAN 2000 - 2001

	NUMBER OF CASES	
SOURCE OF INJURY OR ILLNESS	**2000**	**2001**
Agricultural and Garden Machinery	1	--
Atmospheric & Environmental Conditions	3	1
Building Materials, Solid Elements	4	6
Coal, Natural Gas, Petroleum Fuels & Products	1	--
Construction, Logging & Mining Machinery	2	8

Containers	3	2
Dirt, Earth, Sand, Gravel	1	--
Floors, Walkways, Ground Surfaces	10	13
Food Products, Fresh or Processed	--	1
Handtools - Powered	--	1
Heating, Cooling & Cleaning Machinery	1	--
Highway Vehicle Motorized	8	4
Hydrogen Sulfide	--	2
Ladders	2	--
Machine, Tool & Electric Parts	6	1
Material Handling Machinery	2	4
Medical and Surgical Instruments	1	--
Metal Materials, Nonstructural	1	--
Metal, Wood, & Special Material Machinery	2	4
Miscellaneous Machinery	1	2
Other Structural Elements	1	1
Person – Injured or Ill Worker	--	1
Plant & Industrial Powered Vehicles, Tractors	2	3
Rail Vehicle	1	1
Recreation & Athletic Equipment	--	1
Rocks, Crushed Stone	--	1
Skids, Pallets	1	--
Special Process Machinery	2	--
Structures, Buildings, Guard Rails & Scaffolds	1	--
Trees, Logs	1	2
Vehicle & Mobile Equipment Parts	1	--
TOTAL	**59**	**58**

Source: MIOSHA Information Div., Michigan Dept. of Consumer & Industry Services.

TABLE 5

PROGRAM-RELATED FATALITIES
BY EVENT OR EXPOSURE
MICHIGAN 2000 - 2001

EVENT OR EXPOSURE	NUMBER OF CASES 2000	2001
CAUGHT IN, OR COMPRESSED BY	7	7

EQUIPMENT		
CAUGHT IN/CRUSHED IN COLLAPSING MATERIAL	1	5
CONTACT WITH ELECTRIC CURRENT	8	2
CONTACT WITH TEMPERATURE EXTREMES	1	--
EXPLOSION	1	2
EXPOSURE TO CAUSTIC, NOXIOUS, OR ALLERGENIC SUBSTANCES	1	--
FALL TO LOWER LEVEL	10	13
FALL ON SAME LEVEL	--	2
FIRE	3	4
NON-HIGHWAY MOTOR VEHICLE ACCIDENTS	6	7
PEDESTRIAN, NONPASSENGER STRUCK BY VEHICLE, MOBILE EQUIPMENT	4	7
RAILWAY ACCIDENT	1	--
STRUCK BY OBJECT	16	9
TOTAL	**59**	**58**

Source: MIOSHA Information Div., Michigan Dept. of Consumer & Industry Services.

TABLE 6

PROGRAM-RELATED FATALITIES
BY PARTS OF BODY AFFECTED
MICHIGAN 2000 - 2001

PARTS OF BODY AFFECTED	NUMBER OF CASES

	2000	2001
ABDOMEN	1	1
BACK, MULTIPLE	1	--
BODY SYSTEMS	14	9
CHEST	1	1
HEAD	14	16
NECK	2	2
MULTIPLE PARTS	12	15
PELVIC REGION	4	1
TRUNK, MULTIPLE	10	13
TOTAL	**59**	**58**

Source: MIOSHA Information Division, Michigan Dept. of Consumer & Industry Services.

TABLE 7

PROGRAM-RELATED FATALITIES
BY NATURE OF INJURY OR ILLNESS
MICHIGAN 2000 - 2001

NUMBER OF CASES

NATURE OF INJURY OR ILLNESS	2000	2001
ASPHYXIATION, STRANGULATION DROWNING, SUFFOCATION	3	4
BURN, HEAT	1	2
ELECTRIC SHOCK, ELECTROCUTION	8	2
FRACTURE	--	1
INTERNAL INJURIES OF THE TRUNK	15	15
INTRACRANIAL INJURIES	14	16
MULTIPLE INJURIES	13	13
OPEN WOUNDS	2	2
OTHER POISONING & TOXIC EFFECTS	1	2
OTHER	2	1
TOTAL	**59**	**58**

Source: MIOSHA Information Division, Michigan Department of Consumer & Industry Services.

TABLE 8

PROGRAM-RELATED FATALITIES BY AGE
MICHIGAN 2000 - 2001

AGE	NUMBER OF CASES 2000	2001

20 and Under	2	2
21 - 25	9	6
26 - 30	10	8
31 - 35	5	6
36 - 40	5	7
41 - 45	8	9
46 - 50	3	7
51 - 55	9	5
56 - 60	6	5
61 and Over	2	3
TOTAL	**59**	**58**

TABLE 9

PROGRAM-RELATED FATALITIES BY GENDER
MICHIGAN 2000 - 2001

GENDER	**NUMBER OF CASES**	
	2000	**2001**
MALE	57	57
FEMALE	2	1
TOTAL	**59**	**58**

Source: MIOSHA Information Division, Michigan Dept. of Consumer & Industry Services.

TABLE 10

PROGRAM-RELATED FATALITIES
BY MONTH OF OCCURRENCE
MICHIGAN 2000 - 2001

MONTH OF OCCURRENCE	NUMBER OF CASES 2000	2001
JANUARY	1	5
FEBRUARY	7	8
MARCH	5	0
APRIL	4	6
MAY	4	4
JUNE	2	7
JULY	6	9
AUGUST	6	5
SEPTEMBER	8	4
OCTOBER	5	9
NOVEMBER	3	0
DECEMBER	8	1
TOTAL	**59**	**58**

Source: MIOSHA Information Div., Michigan Dept. of Consumer & Industry Services.

TABLE 11

PROGRAM-RELATED FATALITIES
BY INDUSTRY GROUPS AND DAY OF THE WEEK
MICHIGAN 2000

INDUSTRY GROUP	DAY OF THE WEEK SUN	MON	TUE	WED	THUR	FRI	SAT	TOTAL
AGRICULTURE, FORESTRY AND FISHING	1	-	1	1	-	-	-	**3**
OIL AND GAS EXTRACTION	-	-	-	-	-	-	-	**0**
CONSTRUCTION	-	7	10	5	4	2	-	**28**
MANUFACTURING	-	2	1	1	2	4	6	**16**
TRANSPORTATION AND PUBLIC UTILITIES	-	-	1	1	-	-	-	**2**
WHOLESALE TRADE	-	1	3	-	2	-	-	**6**
RETAIL TRADE	-	-	-	-	-	-	-	**0**
FINANCE, INSURANCE & REAL ESTATE	-	-	-	-	-	-	-	**0**
SERVICES	-	-	1	-	-	-	1	**2**
PUBLIC ADMINISTRATION	-	-	-	1	-	-	-	**1**
TOTAL	**1**	**10**	**17**	**9**	**8**	**6**	**7**	**58**

Source: MIOSHA Information Division, Michigan Dept. of Consumer & Industry Services.

TABLE 12

PROGRAM-RELATED FATALITIES BY

COUNTY OF OCCURRENCE, MICHIGAN, 2001

COUNTY	NUMBER OF CASES
ANTRIM	2
ARENAC	1
CALHOUN	2
GENESEE	1
GOGEBIC	1
INGHAM	3
KALAMAZOO	3
KENT	7
LAKE	1
MACOMB	4
MARQUETTE	1
MONTCALM	1
MUSKEGON	1
OAKLAND	6
ONTONAGON	1
OTTAWA	3
PRESQUE ISLE	1
SAGINAW	2
ST. JOSEPH	1
TUSCOLA	1
WASHTENAW	4
WAYNE	11
TOTALS	**58**

Source: MIOSHA Information Division, Michigan
Dept. of Consumer & Industry Services

PROGRAM-RELATED FATALITY INCIDENTS
BRIEF DESCRIPTIONS OF CASES BY INDUSTRY GROUPS

Agriculture, Forestry and Fishing:

1. Employee was working inside a grain bin during grain transfer and suffocated in the grain.
Violations Noted: General Duty

2. Employee was operating a farm tractor equipped with a rear mounted scraper blade. The employee was pushing manure under a steel tube gate that pivots at the top. The bottom of the gate is pulled up to a vertical position and hooked. The tractor was found running in reverse with the tires spinning. The employee was pinned between the tractor steering wheel and the gate.

Violations Noted: Recording and Reporting of Occupational Injuries and Illnesses
Inspections and Investigations, Citations and Proposed Penalties

3. The employee climbed over the standard barrier of a work platform to gain access to the open top, over a road trailer without fall protection. The employee was attempting to cover the trailer with a tarp and fell over the side landing on his head and shoulder 13 feet below on the concrete floor.

Violations Noted: Floor and Wall Openings, Stairways and Skylight
General Duty
General Provisions

Construction:

1. While attempting to restart a stalled grader the employee crossed the solenoid and the starter causing the machine to bypass the gear motion prevention device. The machine rolled forward crushing the employee. Violations Noted: Statutory Rules - Failure to Report Fatality
General Rules

2. Employee was working in an excavation 7 to 8 feet deep when the side wall caved in burying the employee.

Violations Noted: Excavation, Trenching and Shoring
General Rules
Handling and Storage of Materials
Mobile Equipment

3. Employee was a truck driver delivering mats and poles to a job site. The employee was crushed when a pole knocked him off the truck and fell on him.

Violations Noted: Handling and Storage of Materials
General Rules

Construction (continued)

4. Employee was attaching a piece of pipe to a backhoe to be lifted. The backhoe made contact with an energized 7600 volt line electrocuting the employee. Violations Noted: Excavation, Trenching and Shoring

General Rules
Lifting and Digging Equipment

5. Employee was working on a 66 year old power pole which collapsed causing the employee to fall. The employee was crushed by the pole. Violations Noted: Power Transmission and Distribution

General Rules

6. Employee was working in a trench box while the excavator was bringing in sand to backfill the outside of the trench box. The employee stepped out of the trench box and was crushed between the bucket and the spreader bar.

Violations Noted: Personal Protective Equipment
General Rules

7. Employee was operating a drum hydro compacting machine. He disconnected his seat belt to light a cigarette. The machine hit a rut causing the employee to lose his balance. He fell out in front of the machine and was crushed.

Violations Noted: None

8. Two employee's were working in a holding furnace removing the brick lining. A large section of the brick broke loose and fell crushing the two employees resulting in one fatality and one hospitalization. Violations Noted: General Rules

9. While the employee was striping concrete forms the 12 ft by 16 ft aluminum beam gang form came loose when the last taper tie was removed. The form and the employee fell 44 feet to the crane and then the ground below. Violations Noted: General Duty
General Rules
Fall Protection
Aerial Work Platforms

Construction (continued)

10. Employee while cleaning the operator station of the skid steer equipment overrode all the safety devices of the machine. The employee stepped in between the raised bucket and the body of the machine, activated the bucket and was crushed.

Violations Noted: Mobile Equipment
General Rules 11. Employee was working on a roof applying adhesive to block paraphet. The employee fell approximately 14 feet to the ground below. Violations Noted: Fall Protection
General Rules
Recording and Reporting of Occupational Injuries and Illnesses

12. Ironworkers were setting steel bar joints on a masonry wall. The employee climbed down a vertical toothed masonry wall and slipped or lost his grip and fell to a lower masonry wall 16 ft below. The employee was impaled in a sitting position on vertically protruding 2 foot high #4 rebar. No access ladder was available at the jobsite. Violations Noted: General Rules

General Duty
Fixed and Portable Ladders

13. Employee entered an excavation for a storage tank. The side of the excavation caved in, pushing the employee into the southeast corner of the tank burying him up to the waist. Violations Noted: General Rules
Recording and Reporting of Occupational Injuries and Illnesses

14. Employee was thrown from a wooden debris box being moved by a variable reach fork lift. The employee was riding across the jobsite when a parked semi-trailer was struck causing the employee to be thrown to the pavement. Violations Noted: Fall Protection
Personal Protective Equipment
General Rules
Scaffolds

15. Employee was working between two 8 foot high, 30 foot long retaining walls that were 7 feet apart. The employee was cleaning the bottom edge of the walls. The east wall collapsed causing fatal head injuries to the employee.
Violations Noted: General Rules
General Duty

Construction (continued)

16. Employee standing on top of a bundle of steel decking fell to his death when the unsecured truss collapsed under the weight of the decking. Violations Noted: Steel and Precast Erection
General Duty
General Rules
Lifting and Digging Equipment
Recording and Reporting of Occupational Injuries and Illnesses

17. Employee was attempting to load boom mounted pole setting vehicle on to a trailer. While driving up to the trailer the driver encountered uneven terrain and the boom mounted pole setting vehicle slid. After an attempt was made to correct the slide, the vehicle rolled over causing the employee to suffer fatal head injuries.

Violations Noted: Mobile Equipment
General Duty
Signals, Signs, Tags and Barricades

18. Employee was tearing off and replacing a roof. Roofing material was removed, exposing the metal decking. The employee stepped on deteriorating metal decking and fell 52 feet to the ground.
Violations Noted: Fall Protection
Handling and Storage of Materials
Fall Protection

19. A three man crew set up a scaffold to paint walls and trim. An employee set a ladder on top of the scaffold.
The ladder was displaced and the employee fell to the concrete.

Violations Noted: Scaffolds
Fixed and Portable Ladders
General Rules

20. Employee was working on vertical steel installing chairs. The employee fell backwards from steel rod to the concrete. Violations Noted: Fall Protection
Personal Protection Equipment

Construction (continued)

21. Employee was working from a wood pallet that was elevated 6 feet above the concrete by a lift truck . The employee was removing wood sub-facia on the exterior of the building. The facia came loose and the employee lost his balance, falling backwards off the pallet, onto the concrete floor. Violations Noted: Fall Protection
Scaffolds
General Rules
Personal Protective Equipment

22. Employee was working from an aerial platform with the guardrails removed. The employee walked off the platform to the ground below.

Violations Noted: Aerial Work Platforms
General Rules
Recording and Reporting of Occupational Injuries and Illnesses

23. Employee was working on the ground cleaning up debris from a roof. A dump truck rolled forward pinning the employee between the truck and the house. Violations Noted: General Rules

24. While working from a scissor lift the employee inadvertently activated the controls of the lift. The employee was caught between the machine and the building soffit

Violations Noted: Aerial Work Platforms
Statutory Rules - Failure to Report Fatality

25. A two man crew was painting a bridge. In order to finish the job the employees borrowed a rough terrain fork lift. The weight of the employee tipped the basket and he fell to the ground. The basket also fell to the ground tipping over onto the employee.

Violations Noted: Scaffolds
Recording and Reporting of Occupational Injuries and Illnesses
General Rules

26. Employee was releasing an unsecured joist from the load line of the crane. The joist rolled and fell to the ground and the employee fell 70 feet to the ground.

Violations Noted: Steel and Precast Erection

Construction (continued)

27. Employee was working on an asphalt roadway rehab project and was struck by a motor vehicle.
Violations Noted: Signals, Signs, Tags and Barricades
General Rules

28.

Manufacturing

1. Employee was a die setter. For unknown reasons the employee climbed up on an injection molding machine. The machine operates automatically with a conveyor system that moves by means of an overhead carriage on a track. The employee was found on top of the mold machine with his head in the area where the carriage travels. The employees head was bleeding. This injury caused his death.

Violations Noted: None

2. Employee was the unload operator at the end of a metal finishing line. The employee somehow became entangled in a revolving barrel and was crushed between the top support (which is used to hoist the barrel) and the barrel. At the time of the accident it was determined that a tab on the barrel was not contacting a limit switch that would have stopped the barrel rotation.

Violations Noted: Guards for Power Transmission
General Provisions
Floor and Wall Openings, Stairways and Skylights

3. The employee was setting up a squaring framework to be welded. An Unsecured portion of the metal framework fell and struck the employee in the back. Violations Noted: Statutory Rules - Failure to Report Fatality

General Duty
Powered Industrial Trucks

4. Employees finished performing repairs on a steam turbine. The turbine was being tested and was in the start up mode. During the second test the turbine went into an overspeed acceleration which caused catastrophic failure of the turbine. The rotor buckets propelled through the 2 inch thick housing causing flying fragments to strike the employee. Violations Noted: None

Manufacturing (continued)

5. Employee was crushed by the falling ram of a mechanical power press during removal.
Violations Noted: Lockout/Tagout
Statutory Rules - Failure to Report Fatality

6. Employee was exhausting propane gas from a number of propane gas cylinders when the gas ignited. Employee sustained burns over most of his body and died. Violations Noted: Fire Exits
General Provisions
General Duty
Hazard Communication

7. The employee, a building maintenance employee was fatallyinjured when a 500 gallon tank used to transfer waste, oil, and water ruptured. The employee was using pressurized air on the tank to drain the liquid contents into a waste oil/water trench. Violations Noted: General Duty

8. Employee was pulling multiple logs in a bundle behind a skidder. He noticed one of the logs was crooked and not lying straight. Using a chainsaw the employee began to cut the log. The chainsaw kicked backwards cutting his throat. Violations Noted: General Duty

9 - 11. Three employees were overcome by the release of methyl mercaptan from a tank car.
Violations Noted: General Duty
Hazwoper
Eyewash/Safety Shower
Guards for Power Transmission
Fire Brigades
Lockout/Tagout
Hazard Communication
Respiratory Protection Standard
Fire Exits
Process Safety Management

Manufacturing (continued)

12. Employee was operating a drill press using a honing device. The employee did not have training in the proper speed of the device and was operating at a speed, which caused the device to fly apart. A piece of the honing device flew across the shop hitting another employee in the chest. Employee went into cardiac arrest. Violations Noted: Metalworking Machinery
General Duty

13. The employee was assisting in a die change in a progressive press, which utilizes an automated bolster system. The employee was walking through the bolster transfer area when he was pinched between the sliding bolster mechanism and the press. Violations Noted: Lockout/Tagout
General Provisions

14. Employee was operating a forklift to move parts bins. The forklift tipped and pinned him under the cage crushing his chest and upper torso. Violations Noted: Powered Industrial Trucks

15. Employee was moving a stack of bus stop roofs with an overhead crane. The load was not stable or secure. The stack tipped causing a roof to slide off pinning the deceased to the floor crushing him.
Violations Noted: Overhead and Gantry Cranes

16. Employee was attempting to fell a tree when a lodged tree about 5 to 6 feet away fell and struck the employee in the head fracturing his skull. Violations Noted: Logging
Inspections and Investigations, Citations and Proposed Penalties

Transportation and Public Utilities

1. Employee was found crushed between the bucket and the frame of a tractor he was using to remove snow. Violations Noted: General Duty
Recording and Reporting of Occupational Injuries and Illnesses

Transportation and Public Utilities (continued)

2. Employee's job was to perform daily maintenance on buses returning to the terminal at the end of the shift. The employee had performed the maintenance on a bus, driven the bus into the parking lot and

was returning to the terminal. While walking back to the terminal, he was struck by another employee who was driving his personal pick-up through the parking lot. Violations Noted: General Duty

Wholesale Trade

1. The employee was observed several times during the shift driving a sweeper scrubber. Employee was found laying on the floor, no pulse and not breathing. It was speculated that the employee ran into a rack while sweeping.

Violations Noted: Recording and Reporting of Occupational Injuries and Illnesses 2. Employee was conducting repairs to a bulk cooler/washer and contacted live electrical wires when reaching inside of the control panel. Violations Noted: Electrical Safety Related Work
Personal Protective Equipment
Statutory Rules - Failure to Report Fatality
Recording and Reporting of Occupational Injuries and Illnesses

3. Employee was feeding the end of scrap metal coming from a slitter on a scrap rewinding wheel. The scrap rewinder has an oscillating device to distribute the scrap evenly. The employee was caught and crushed by the oscillating device. Violations Noted: Lockout/Tagout
General Provisions

4. Employee was a material handler and was assigned to clean up scrap metal along side of a spur track. Later a switch engine backed three rail cars onto the spur track. The employee was found under the wheel of the rail cars. Violations Noted: None

5. Employee was removing parts from a scraped pickup truck. The truck was supported on old tire rims. The truck slipped from the rims crushing the employee who was working underneath the truck.
Violations Noted: Automotive Service Operations
Recording and Reporting of Occupational Injuries and Illnesses

Wholesale Trade (continued)

6. Employee was driving a self propelled boom truck onto a flatbed trailer. The boom truck slipped off the flatbed trailer dropping about 4 feet to the ground throwing the employee from the basket, hitting his head on the paved drive. Violations Noted: Vehicle Mounted Elevating and Rotating Platforms

Services

1. Employee was repairing a pin setting machine for bowling pins when the machine activated, crushing the employee in the machine. Violations Noted: Lockout/Tagout
Inspections and Investigations, Citations and Proposed Penalties

2. Employee was climbing a ladder on a roadside sign, while carrying a replacement motor. Employee was found on the ground apparently having fell from the ladder. Violations Noted: Fixed Ladders

General Duty
Lockout/Tagout
General Provisions

Public Administration

1. Employee was attempting to climb from an 18 foot straight ladder onto a roof to remove snow when the ladder slid out from under employee allowing him to fall from the roof to the ground. Employee struck his head.

Violations Noted: Portable Ladders
